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PROFESSIONAL READING

*Air Warfare in the Missile Age**

Colonel Myrl W. Allinder, U. S. Marine Corps

Here is an outstanding case for buying large numbers of F-20s, A-10s and Piper Enforcers to displace the current trend of the Navy and Air Force toward ever higher technology fighter aircraft. But that is *not* Nordeen's conclusion.

The author chronicles 9 "wars" of the last 20 years—of which the outcomes of only 3** are positively affected by the air battles:

Vietnam (Rolling Thunder): 1964-68

Vietnam (Linebacker): 1971-73

Indo-Pakistan (Kashmir): 1965

Indo-Pakistan (Bangladesh): 1971

** Arab-Israeli (6-Day War): 1967

Arab-Israeli (Attrition): 1967-70

** Arab-Israeli (Yom Kippur): 1973

Arab-Israeli (Lebanon): 1973-83

** U.K.-Argentine (Falklands): 1982

An employee of McDonnell Aircraft in St. Louis, Nordeen comes through as a proponent of the Douhet philosophy, i.e., that airpower in and of itself can be decisive in determining the outcomes of wars. His desire for *Air*

*Nordeen, Lon O., Jr. *Air Warfare in the Missile Age*. Washington, D.C.: Smithsonian Institution Press, 1985. 211 pp. \$24.95

Colonel Allinder is a Marine F-4 fighter pilot with 375 missions in Southeast Asia. He has commanded 3 squadrons and is currently Chief of Plans, Joint Deployment Agency, Joint Chiefs of Staff.

Warfare is to show “. . . how [airpower] . . . influenced the outcome of [ground] battle.” Nordeen’s “airpower” is loosely defined as the “. . . aircraft [including their technological gimcracks], weapons, tactics, training, political aspects, and other factors.”

At least one of these “other factors” should have been included, but was not—the basic philosophy for employment of airpower and the accompanying command and control system that puts the philosophy into practical application.

The book’s omission of this fundamental factor is accompanied by the failure to give any kind of measure of effectiveness for determining the contribution of the airpower to the ground battle outcome. Rather, it focuses on the mistaken measure of effectiveness reflected by a detailed recount of each shoot-down by air-to-air and by AAA/SAM.

We are diverted, intentionally or not, from some very pointed facts which are *not* stated in this book:

1. The last time U.S. fighters made a positive difference (and then only in the short run) was at Khe Sanh, Vietnam; the time before that was at Chosin, Korea in November–December 1950. In both cases the ground forces got out only because tactical air was brought to bear in direct support of the ground battle.

2. U.S. strategic bombing (including the use of fighters in strategic interdiction and bombers in the strategic role) last made a provable difference in the positive outcome of a U.S. war, at Hiroshima and Nagasaki in August 1945. Strategic bombing and interdiction made no difference to the outcomes in 1950–53 in Korea. The use of B-52s in a strategic mode may have helped the United States to exit more gracefully from the defeat in Southeast Asia in 1971–73, although a very strong counterargument can be made that fighter and bomber pilots lost over North Vietnam in a strategic bombing effort had a far greater negative effect, not to mention the devastating cost of airplanes lost. In fact, the B-52s were used, in part, to help effect the eventual release of the captured pilots.

3. *Air Warfare*’s histories of these nine “wars” prove convincingly that in conventional warfare, only ships at sea or armies on the ground are decisive; and that airpower, to be effective, must be subordinate to and in direct support of the sea or ground units. This history lesson says something about the adequacy or inadequacy of the current air-land battle theology-philosophy touted for NATO.

Finally, Congressman Otis Pike discovered this whole mess in 1968 (how come you did not “rediscover” it in 1985, Lon?) when conducting his Pike Committee Hearings regarding the lack of U.S. airpower support for the bulk of the GIs in the south of Vietnam. Many of the KIAs and WIAs were from *lack of air support*. Congressman Pike’s discovery about the Vietnam air war is what the Army knew for 3 bloody years: there was no Air Force command

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and control system to provide close air support (CAS) for the Army until 1968, 3 years after the "war" began. This same 3-year hiatus had occurred in Korea from 1950 to 1953, with the same disastrous results on the ground: We took heavy hits. (Lest you think the JCS and air planners have learned from these "new" ideas, may I remind you, Lon, of the disastrous lack of objective of the tactical air interdiction strike into Lebanon on 4 December 1983. But, what the hell? Why send one 2,000-pound 16-inch 1928 technology battleship shell to do a political job when you can risk dozens of fighter pilots and literally hundreds of millions of dollars worth of high-tech fighters?)

Lack of airpower support for the Army on the ground in the south of Vietnam finally spurred the Congress to support the Army in the development of Army airpower in a philosophy sharply different from that of Douhet: the advanced attack helicopter—CAS-capable platforms such as the AH-1 Cobra, the AH-56 Cheyenne (killed, thank heaven, by DOD), and the current AH-64 Apache. The Air Force reacted to the criticisms of Congress and to the Army competition for the CAS mission by building the A-10, a truly first-rate CAS machine, but which is also being quietly suppressed by the U.S. Air Force.

Yes, A-10 and F-20 and Piper Enforcer are dull: the A-10 and Enforcer will not even go mach 1, much less mach 2; and the F-20 does not have the legs to go deep and cannot pack all the electronic gee-tee-ee-whizzery that industry and fighter pilots keep coming up with, and that the Lon Nordeens of the M.I.C. keep "proving" that we need in books like *Air Warfare*. But, what about the exponential increases in costs of modern fighters? There is no mention of fighter costs in *Air Warfare*.

Defense Science Board surveys of increases in tactical air costs over the last 40 years show that if modern fighter cost trends continue at their current rates, and if the defense budget continues to grow at its current rate, that by about the year 2050 it will take the entire defense budget to buy one fighter. And the bulk of this increase in cost will be for high tech and avionics. At the same time, there will be no comparable increase in tactical air contribution to the outcomes of the wars! Nordeen reinforces the error of all fighter enthusiasts (except for a few of the real reformers, like Pierre Sprey) by measuring the effectiveness of fighters in terms of one fighter vs one fighter, or vs one SAM, e.g., one F-15 vs one MiG-23 or MiG-25, or one F-18 vs one SAM-6 or SAM-8.

Air battles are not fought one vs one, but many vs many, and *Air Warfare* reveals that the following environment is more conducive to the positive outcome of such air battles:

- Friendly radar coverage, i.e., under your own AWACS or GCI (ground control intercept) and not 200 or more miles into the enemy's territory under *his* radar.
- Numbers count. But to get them there must be less "goldplate." There are some fighter pilots who are "foolish enough"—and not all of them are

wearing commie red drawers, either—to believe that three old MiGs could kill one high-tech fighter, and that there might be at least one MiG left alive when the dogfight is over; and that in a fight of 33 new high tech vs 100 old MiGs, all orderly classroom high-tech solutions degenerate in about one microsecond after the *melée* starts, in an effort to just *survive*.

- More than one set of eyeballs in the cockpit is advantageous. A dual-seater will do better in a many vs many fight simply because it's the guy you *don't* see who shoots you down. A gun (preferably one with a high-tech continuous stream computing gunsight to allow quick snapshots of bogeys flashing across your windscreen) is essential.

Conclusions that could have been drawn from the historical evidence presented in *Air Warfare*, but were not, perhaps because they do not blindly reinforce the aircraft industry that is geared to replace the hundreds of billions of dollars worth of fighters and missiles "needed" for the coming decades:

1. In all the wars cited, the fighter is effective *only* as it supports the ground forces. The objective of each of the conventional wars cited was real estate, and that was gained by the ground units. The fighters, then, must contribute to the attainment of the ground objective if it is to be termed "effective."

2. The man is still the most important part of a machine.

3. For that reason and others, computers and avionics should not displace the second man on a fighter. Just as missiles could not displace the gun but are an adjunct to the gun, so avionics cannot displace the second man, but are an adjunct to help cover the rear half of the fighter universe, the half a fighter most often gets shot down from. Consider the following evidence: Eric Hartmann, the world's ace of aces with over 350 kills, estimates that less than 5 percent of his victims ever saw him as he shot them down from astern; about 80 percent of all visual sightings of MiGs in Vietnam were over the left shoulder or the right, and usually by the rear seater; in a multibogey, multi-SAM, low to the ground high-speed fight, it is physically impossible for 95 percent of all fighter pilots to keep track of anything more than what is in a cone 60° left and right of the windscreen. (Any aircraft industry engineer or salesman who says the fighter pilot can work all the buttons, switches, computers and displays in an F-18 doing 600 knots at 1,000 feet or less over the ground, and still keep track of anything behind his wing line, should be made to demonstrate that claim in a live fire test with himself as pilot.)

4. The astonishing success of the Israelis against Syrian SAM-6s and MiGs in the Bekaa Valley in June 1982 demonstrates that fighter operations require *teams* of specialized aircraft to establish air superiority over the battlefield, that a few special types of avionics-loaded support aircraft, including AWACS, ESM, Wild Weasel with HARM, RVPs and a jammer like the EA-6B, can demolish the world's most sophisticated enemy air defense system. Although the RVP has been around "forever," neither the U. S. Air

Force nor the U. S. Navy bothered with this mundane, low cost, low technology, pilotless aircraft until the Israeli spectacular show in the Bekka Valley. We keep trying to pack *all* the technology into *all* the fighter frames.

5. Improve on the technology at hand. Invent new technology or make aeronautical applications of new technology only to support new tactical goals. The services have studiously avoided the procurement of RPV's and low cost, adequately effective airframes, and have avoided the procurement of the second seats for recent fighters. On the other hand, there is a great deal that could be done to enhance the fighter capability of the United States literally over night. Current VSTOL technology could reduce the USAF reliance on already targeted 10,000-foot strips and would increase the complexity of the Soviet air superiority problem by a large measure; and the Navy could put a simple air-to-air radar in the multibillion-dollar fleet of AV-8Bs and increase that aircraft's air-to-air capability considerably over its current day-visual-flight-only capability. Ask the Brits. It is safe to say that without the Harriers as fighters, the British success in the Falklands would have been in doubt.

At a time when the United States is looking for military reform from within or from without the military; at a time of ever-growing national budget deficits and concomitant requirements to increase the effectiveness of every defense dollar; at a time when we need some better ideas on how to succeed in NATO with a conventional force rather than the air-land battle formula of dogfighting our way through East Germany and Poland with limited numbers of high-tech fighters to do questionable damage to enemy fighters and ground targets of the second and third echelon, while the Soviet tank crews of the first echelon are perhaps making the difficult choice of ordering French or Belgian wine at the Antwerp hostelrys; at such a time, *Air Warfare* comes across as the equivalent of a review of dates and places for a high school history test.
